



Amendments to the Claims

This listing of claims replaces all prior versions, and listings, of claims in the application.

Listing of Claims

1-9. (Canceled)

10. (New) A rotary printing machine comprising:

an ink reservoir containing ink having a mixture ratio of color pigments and a volatile solvent;

an ink transfer roller that transfers the ink for application to a print substrate from the ink reservoir; and

a mechanism for effecting evaporation of the solvent from at least one ink transfer roller,

the intensity of the ink applied to the print substrate being adjustable by effecting the solvent evaporation so as to adjust the ink mixture ratio.

11. (New) The rotary printing machine according to claim 10, wherein the intensity of the ink applied to the print substrate increases with increased solvent evaporation and decreases with decreased solvent evaporation.

12. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation is a blower that flows a gas onto the ink transfer roller.

13. (New) The rotary printing machine according to claim 12, wherein the gas is air.

14. (New) The rotary printing machine according to claim 12, further comprising a vacuum source for increasing a rate of the gas flow.

15. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation is a source of electromagnetic radiation that irradiates the ink on the ink transfer roller.

16. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation separates a laminar border layer adhering to the ink transfer roller.

17. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation heats the ink transfer roller.

18. (New) The rotary printing machine according to claim 10, further comprising a second ink reservoir containing ink for applying additional ink to the ink transfer roller, the second ink reservoir located in a transfer direction between the ink transfer roller and the mechanism for effecting solvent evaporation.

19. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation operates on a first portion of the ink transfer roller, and

further comprising at least a second mechanism for effecting solvent evaporation that operates on another portion of the ink transfer roller.

20. (New) The rotary printing machine according to claim 10, wherein the mechanism for effecting solvent evaporation is controllable so as to adjust an amount of the evaporation and thereby, the ink mixture ratio and the intensity of the ink applied to the print substrate.

21. (New) A rotary printing machine comprising:

an ink reservoir containing ink for rotogravure or flexographic printing, the ink having color pigments and a solvent in a first ink mixture;

an ink transfer roller that transfers the ink for application to a print substrate from the ink reservoir; and

a mechanism for effecting evaporation of the solvent from the ink on the ink transfer roller so as to provide a second ink mixture having less solvent than the first ink mixture,

the intensity of the ink applied to the print substrate being adjustable by controlling the solvent evaporation.

22. (New) The rotary printing machine according to claim 21, wherein the intensity of the ink applied to the print substrate increases with increased solvent evaporation and decreases with decreased solvent evaporation.

23. (New) The rotary printing machine according to claim 21, further comprising a plurality of the ink reservoirs containing ink; and

a corresponding plurality of the mechanisms for effecting solvent evaporation,

each of the mechanisms for effecting solvent evaporation being located, in a direction of ink transfer to the print substrate, following each corresponding ink reservoir.

24. (New) A method of adjusting ink intensity on a print substrate of a rotary printing machine, comprising the steps of:

supplying ink for rotogravure or flexographic printing from an ink reservoir to an ink transfer roller that transfers the ink for application to a print substrate, the reservoir ink having a mixture ratio of color pigments and a solvent; and

effecting evaporation of the solvent from the ink on the ink transfer roller so as to adjust the ink mixture ratio, and thereby adjust the intensity of the ink applied to the print substrate.

25. (New) The method of adjusting ink intensity according to claim 24, wherein increasing the solvent evaporation increases the intensity of the ink applied to the print substrate, and decreasing the solvent evaporation decreases the intensity of the ink applied to the print substrate.

26. (New) The method of adjusting ink intensity according to claim 24, wherein the step of effecting solvent evaporation is controllable so as to adjust an amount of the evaporation and thereby, the ink mixture ratio and the intensity of the ink applied to the print substrate.

27. (New) The method of adjusting ink intensity according to claim 24, wherein the step of effecting solvent evaporation includes flowing a gas onto the ink transfer roller.

28. (New) The method of adjusting ink intensity according to claim 24, wherein the step of effecting solvent evaporation includes heating or irradiating the ink on the ink transfer roller.

29. (New) The method of adjusting ink intensity according to claim 24, further comprising supplying ink from a second ink reservoir, and

effecting solvent evaporation from the second reservoir ink supplied to the ink transfer roller.